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***RESEARCH PAPER***

# Effect of different sources and levels of potassium on yield, quality and nutrient uptake by lilium (*Lilium longiflorum*) grown under polyhouse condition

N.R. SATPUTE*, J.M. WAGHMARE[1], J.D. JADHAV AND M.B. JADHAV[2]
Zonal Agricultural Research Station, Krishak Bhavan, SOLAPUR (M.S.) INDIA (Email : satputenitin1@gmail.com)

**Abstract :** The polyhouse experiments were conducted at High-Tech Floriculture and Vegetable Project, College of Agriculture, Pune during 2007-09 to study the effect of different sources and levels of potassium fertilizers on yield, quality and nutrient uptake by lilium (*Lilium longiflorum*) grown under polyhouse conditions with 12 treatments was conducted in clay loam soil having pH 6.07. Application of potash (through sulphate of potash @ 200 mg plant$^{-1}$ week$^{-1}$) to lilium flower crop (var. pollyanna) recorded maximum yield (7992 flower stalk per polyhouse) and net monetary returns (Rs. 77694 per polyhouse) which were at par with $K^+$ (through sulphate of potash @ 250 mg plant$^{-1}$ week$^{-1}$) to lilium flower crop. Like number of leaves per plant, plant height, stem diameter, plant spread, number of flower stalk per m$^2$, number of flowers per stalk, vase life of flower was also recorded higher with treatment of sulphate of potash @ 200 mg plant$^{-1}$ week$^{-1}$ while other treatment of sulphate of potash @ 250 mg plant$^{-1}$ week$^{-1}$ followed it closely. The uptake of nitrogen, phosphorus and potassium was recorded maximum at recommended potash fertilizer practice *i.e.* @ 200 mg plant$^{-1}$ week$^{-1}$. The nutrient status of the soil after the harvest was better when both sulphate of potash and @ 200 mg plant$^{-1}$ week$^{-1}$ were applied to lilium crop. Thus, it would be better to apply potash through sulphate of potash @ 200 mg plant$^{-1}$ week$^{-1}$ to lilium crop for higher productivity and profitability along with good quality as well as good soil condition.

**Key Words :** Sulphate of potash, Muriate of potash, Nitrate of potash, Lilium, Days after planting

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*** Author for correspondence :**
[1]Division of Agronomy, College of Agriculture (M.P.K.V.), PUNE (M.S.) INDIA
[2]Division of Soil Science, College of Agriculture (M.P.K.V.), PUNE (M.S.) INDIA